REMARKS

Claims 20-39 remain in this application. Claims 1-19 have been cancelled.

Before responding to the Examiner's rejection based on the prior art, a brief description of the present application is provided. The present application is directed toward a method and apparatus for utilizing resources on a shared client network environment. Computers in a network environment can be categorized as two types: servers and clients. In addition, a client can be further understood to be a thin client (in contrast with a thick client or a full-featured workstation). A thin client (or a DTU) is a small, stateless, "plug and work" desktop computer whose main function is to process all input and output for the user and to manage communication with at least one server. All other client processing for the user are concentrated on a group of client servers and shared amongst a community of DTUs. The group of client servers can be called a shared client (or a consolidated client) because, although the servers are often the equivalent of larger powerful server machines, they perform the traditional role of the traditional "client" in a traditional client/server architecture. In addition, the shared client is "shared" by a large number of DTUs (that are shared by an even larger number of users on the DTUs). The removal of the traditional client processing (e.g., state maintenance and computation power) from the DTU (or thin client) into the shared client servers permits simplification of the DTU in the network because software and hardware for performing these tasks are not needed at the DTU.

Because the DTUs are stateless (i.e., devices that process information without any knowledge of previous/subsequent information), a user's interaction with the network are managed using a persistent user session and the interaction can be instantly sent to any DTU within the network. That is, a user can be in the middle of a user session (associated with one or more applications) on one DTU, move to another DTU and then resume the user session exactly where the user left off. Similarly, if a

DTU fails, a user can move from the failed DTU to another DTU without losing any work.

In one embodiment of the present invention, when a particular user session (801 or 802) within a shared client server (800) is disassociated with a DTU (811 or 812), one or more applications within the particular user session stop or reduce consumption of one or more resources from the client server (800). Specifically, the client server (800) determines when an application (803, 804, 805, 806, 807, or 808) within a user session (801 or 802) becomes inactive. A first signal is then sent to the application to indicate that the application should stop or reduce consumption of one or more resources (809) within the server (800). The server (800) then determines when the application should resume activity and sends a second signal to the application to resume or increase consumption of the one or more resources within the client server. This management of the one or more resources within the shared client server is effected transparently (e.g., via a filter), below the notice of (or independently from) the applications within the particular user session. That is, the applications are not modified within the present network environment in any way.

The Examiner rejected Claims 1-3, 5-10, 12-16, and 18-19 under 35 U.S.C. § 102(e) as being anticipated by Spilo. In addition, Claims 4, 11, and 17 are rejected under 35 U.S.C. § 103(a) over Spilo in view of Tushie. These rejections are respectfully traversed.

Spilo discloses a method for reducing the memory requirements on a traditional Windows based (e.g., Windows 95) personal computer (PC) that first minimizes (the window of) an application running on the Windows PC and then compresses and suspends the application. See Col. 4, lines 30-50. By contrast, as mentioned above, the applications of the present invention are not modified (e.g., compressed) in any way. Rather, the present invention includes, for example, the use of a separate filter located on a client server to stop (or slow down) or start (or speed up) the consumption of a resource on the client server by the application.

Moreover, Spilo does not disclose or suggest maintaining a user session having a plurality of applications when the user is disconnected from the DTU. That is, there is no suggestion in Spilo that a user session is maintained at its Windows based computer when the user is disconnected from its computer. Thus, the present invention is novel and inventive for the additional reason that the present shared client computing architecture persistently maintains a user session associated with a user, even when the user is disconnected from an interface device. In the present invention, users can enable their unique session at any one of the DTUs, disable the session on that DTU, and re-enable the same session on the same or another DTU.

In addition, Spilo is directed to nothing more than a traditional state machine (i.e., a Windows or a Windows 95 based personal computer) that may not even be associated with a traditional network computer architecture. The present invention, on the other hand, is directed to a stateless machine in a shared client computing architecture. Accordingly, Spilo fails to disclose, teach, or suggest the stateless machine (i.e., the DTU) of the present invention.

Lastly and perhaps most importantly, Spilo discloses that "it is desirable to leave the decision to suspend the application to the user." See Col. 3, lines 16-26. By contrast, the present application teaches that "Historically, the control over the manner in which running applications consume resources was done manually. . . . However, these strategies break down in the shared client computing architecture because of the vast numbers of DTUs or terminals that may connect to a shared client, and the diversity and unpredictability of the nature of the sessions." See the last paragraph of the background section. Thus, Spilo discloses only the known prior art resource management approach of having a user manually decide when to suspend an application. In fact, Spilo's disclosure that its manual method "is desirable" actually teaches away from the resource-managed approach for a shared client computing system of the present invention.

The Tushie patent is cited by the Examiner with respect to Claims 4, 11, and 17

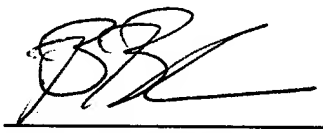
merely for its disclosure of a "smart card." First, it should be noted that Tushie discloses nothing more than a method for making a personalized smart card. There is no teaching or suggestion in Tushie of using its "smart card" with the Windows based personal computer resource management approach in Spilo (which should already be personalized). Regardless, Tushie otherwise fails to make up for the deficiencies in Spilo cited above. Thus, the purpose or the way the smart card (or identifiers) are being used in the present invention (i.e., to manage server resources) should be additionally patentable over Spilor and/or Tushie.

In view of the above remarks, the Applicants respectively submit that the claims as previously presented are not disclosed or suggested by Spilo and/or Tushie. Nevertheless, in order to expedite allowance, the rejected Claims 1-19 are being cancelled herein, without disclaimer and without prejudice. New Claims 20-39 have been added in the current application to better clarify the present invention and its advantages. It is also respectfully submitted that the new claims are neither disclosed in nor suggested by any of the references made of record.

In view of the foregoing, the Applicants respectfully submit that Claims 20-39 are in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited. To the extent it would be helpful to placing this application in condition for allowance, the Applicants encourage the Examiner to contact the undersigned counsel and conduct a telephonic interview.

To the extent necessary, Applicants petition the Commissioner for a one-month extension of time, extending to May 15, 2003, the period for response to the Office Action dated January 15, 2003. A check in the amount of $110.00 is enclosed for the one-month extension of time pursuant to 37 CFR §1.17(a)(1). The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,



Date: May 13, 2003

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